

Code: 2464

Title: MATERIALS TESTING TECHNICIAN-SENIOR

**SUMMARY:** Performs technical work leading and participating in the sampling, testing and analysis of construction materials, including the calculation of mix ratios. This is distinguished from the Materials Testing Technician classification which performs the full realm of construction materials testing, but does not lead the work of others.

**DUTIES/RESPONSIBILITIES:** (Work assignments may vary depending on the department's needs and will be communicated to the applicant or incumbent by the supervisor.)

Leads and participates in the sampling, testing and analysis of construction soils and steels as part of the construction quality control process;

Trains less experienced technicians and makes work assignments;

Calculates asphaltic concrete and soil cement mix design ratios by conducting asphalt, aggregate, stability, flow and strength retention analyses;

Performs density and nuclear density tests to determine if construction materials meet density requirements and makes recommendations as to how to achieve proper density levels;

Makes recommendations to contractors, suppliers and construction inspectors concerning construction efficiency and cost effectiveness;

Calibrates and inspects equipment used in the analysis of soils and steels and in the mixing of asphaltic concrete and soil cement;

Coordinates materials testing schedules with other divisions and contractors involved in construction;

Prepares and submits daily analysis reports to the supervisor.

**KNOWLEDGE & SKILLS:**

Knowledge of:

- techniques of leading, training and assigning work to staff;
- testing, analytical procedures and engineering calculations involved in the calculation of asphaltic concrete and soil cement mix design ratios;
- density and nuclear density testing procedures;
- procedures of preparing analysis reports;
- soil and steel types and behaviors under varying conditions.

Skill in:

- leading, training and assigning work to staff;
- performing complex calculations involved in testing procedures;
- operating technical laboratory and field equipment;
- analyzing test data and results and preparing daily reports.

**MINIMUM QUALIFICATIONS:**

**EITHER:**

(1) Completion of course work in algebra and trigonometry from an accredited school and four years of experience sampling and testing construction materials.

**OR:**

(2) Two years of experience with Pima County as a Materials Testing Technician.

OR:

(3) Four years of experience with Pima County as a Public Works Engineering Technician.

OTHER REQUIREMENTS:

Licenses and Certificates: All positions require a valid Arizona Class D Driver's License at the time of appointment. Certification by the State of Arizona in nuclear density testing safety procedures is required by the completion of the probationary period. Failure to obtain/maintain the required certification shall be grounds for termination.

Physical/Sensory Requirements: Physical and sensory abilities will be determined by position.

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.

Pima County

07/01/86  
Updated 12/06/07(team)